PROC. ENTOMOL. SOC. WASH.
109(2), 2007, pp. 493–495

NOTE

The Second Record of the Genus *Eumerus* Meigen, 1822 (Diptera: Syrphidae) for the Neotropical Region and the First for Brazil

Eumerus Meigen is a genus of Old World origin. In recent times, it has been introduced into the Nearctic and Neotropical regions. There are 280 species of *Eumerus*: Palaearctic (163), Afrotropical (77), Oriental (34), Australian / Oceania (18), Nearctic (3), and now Neotropical (2). In the Nearctic Region, three species, *E. funeralis* Meigen, 1822 [= *tuberculatus* Rondani, 1857], *E. strigatus* (Fallén 1817), and *E. narcissi* Smith, 1928, were introduced from Europe by commerce with onion, narcissus, and related bulbs.

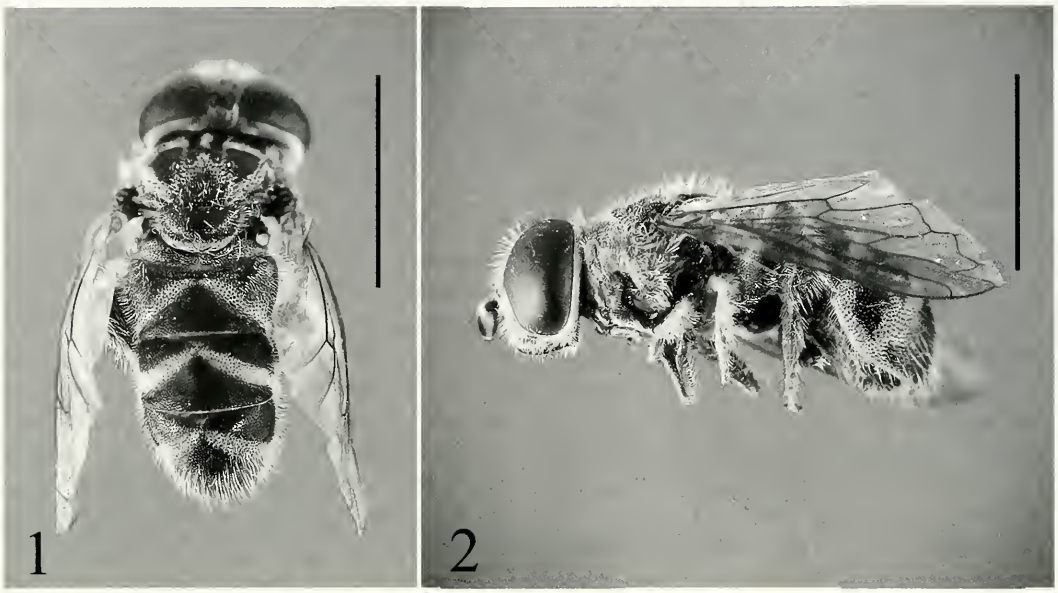
Larvae have been found on a variety of host plants of economic importance: bulbs of Liliaceae (onion and hyacinth); Amaryllidaceae (narcissus); Iridaceae (iris); stems of Umbelliferae (parsnip and carrot); tubers of Solanaceae (potato); roots of Compositae (salsify); and bulbs and roots of Orobanchaceae (Pérez-Bañón and Marcos-Garcia 1998).

Larvae of *Eumerus* may be identified by the following characters: mouth hooks and fleshy mandibular lobes outside the mouth; dorsal lip with a setal fringe; antenno-maxillary organs on flattened, oval-shaped lobes; middle pair of lappets divided into two small projections; locomotor organs barely projecting from ventral surface; and posterior respiratory process at tip of slightly extended anal segment (Rotheray and Gilbert 1999).

Adults are small to medium-sized, black or black and red, and with characteristic wing venation: crossvein r-m apical to middle of cell dm and vein M1 strongly angulate with spurs. The hind femur is often swollen and armed in the male of some species. The face is also characteristically pilose, without a tubercle, and the mouth edge only slightly projecting. Most are thermophilous and may be found in grasslands and at the borders of woods and bushes, often near the larval food plants. Most species fly quickly near the ground, which makes them difficult to spot (Hull 1949). The genus can be keyed out in Thompson (1999).

This is the second record of *Eumerus* in the Neotropical Region. Previously, *Eumerus funeralis* Meigen [as *tuberculatus* Rondani] was reported from Magdalena, Colombia (Thompson et al. 1976). This is the first record of the genus in Brazil and the first record of *E. obliquus* (Fabricius) (Figs. 1, 2) for the Neotropical Region. A single female of *E. obliquus* was collected in a Malaise trap in the vicinity of Ponta Grossa, Paraná, southeastern Brazil. The collecting was carried out as part of the project PROVIVE (Projeto de Levantamento da Fauna Entomológica de Vila Velha, Ponta Grossa, Paraná, Brasil – Survey of the Entomological Fauna of Vila Velha State Park, Ponta Grossa, Paraná, Brazil). The specimen was caught during the week of 06-13.IX.1999 in a forest that has been in a natural process of regeneration for about 20 years. The locality, once used for seasonal crops such as beans and corn, is about 335 m from the edge of the forest.

Another female of *E. obliquus* was collected with a hand net in the State of São Paulo, in Ribeirão Preto, 15.VII.2003, on *Cajanus cajan* (L.) Mill. (Fabaceae). The Brazilian common name for this crop is Guandu-anão. This is



Figs. 1–2. *Eumerus obliquus*, female. 1, Habitus, dorsal view. 2, Habitus, lateral view. Scale bar = 3 mm.

a very common plant in central Brazil that was introduced from Africa through Guyana by slaves. It is edible and considered a good source of protein (Morton et al. 1982).

The distribution of *E. obliquus* includes southern Europe, widespread in Africa including St. Helena and Madagascar, and Australia (introduced). These first records for Brazil confirm the presence of this species in the Neotropical Region. Because of the wide range of host plants (Moor 1973), this species probably has been introduced with various agriculturally important plants. Once introduced, it can adapt to native plant species (Pérez-Bañón and Marcos-Garcia 1998).

Pérez-Bañón and Marcos-Garcia (1998) studied the larvae of *Eumerus purpurariae* Baez, 1982, and found some morphological similarities with those of *E. obliquus*. According to these authors, the morphological similarities between the two species probably are due to their similar food preferences such as decaying fluids from plant tissues.

The specimen collected in the state of Paraná was identified by F.C. Thompson, Systematic Entomology Laboratory, USDA, Washington, D.C., and the specimen from São Paulo State, by comparison to the first one. Both specimens are deposited in the Entomological Collection Pe. Jesus Santiago Moure, Department of Zoology, Curitiba, Paraná, Brazil.

We are grateful to F.Christian Thompson (Systematic Entomology Laboratory, USDA, Washington, D.C.) for the identification of the material and critical review of the manuscript; to Ángeles Marcos-García (Centro Iberoamericano de la Biodiversidad, Universidad de Alicante, Spain) and Wayne N. Mathis (National Museum of Natural History, Smithsonian Institution, Washington, D.C.) for critical review; to Ana Maria de Faria (Secretaria de Agricultura e Abastecimento, Ribeirão Preto, São Paulo, Brazil) for donation of the specimen to the Entomological Collection Pe. Jesus Santiago Moure, DZUP; and to CNPq for financial support. This is

contribution number 1641 from the Department of Zoology of Federal University of Paraná, Curitiba, Paraná, Brazil.

Literature Cited

Hull, F. M. 1949. The morphology and interrelationship of the genera of syrphid flies, recent and fossil. Transactions of the Zoological Society of London 26(4): 257–408.

Moor, F. C. de. 1973. Notes on a syrphid fly, *Eumerus obliquus* (Fabricius) (Diptera: Syrphidae). Arnoldia 6(15): 1–7.

Morton, J. F., R. E. Smith, M. A. Luco-Lopez, and R. Abrans. 1982. Pigeon-peas *Cajanus cajan* Millsp): A Valuable Crop of the Tropics. Mayaguez, University of Puerto Rico - Department of Agronomy and Soils, Puerto Rico, 122 pp.

Pérez-Bañón, C. and A. Marcos-Garcia. 1998. Life history and description of the immature stages of *Eumerus purpurariae* (Diptera: Syrphidae) developing in *Opuntia maxima*. European Journal of Entomology 95(3): 373–382.

Rotheray, G. and F. Gilbert. 1999. Phylogeny of Palaearctic Syrphidae (Diptera): evidence from larval stages. Zoological Journal of the Linnean Society 127: 1–112.

Thompson, F. C. 1999. A key to the genera of the flower flies (Diptera: Syrphidae) of the Neotropical Region including descriptions of new genera and species and a glossary of taxonomic terms. Contributions on Entomology, International 3(3): 322–378.

Thompson, F. C., J. R. Vockeroth, and Y. S. Sedman. 1976. A Catalogue of the Diptera of the Americas South of the United States. Museu de Zoologia da Universidade de São Paulo, São Paulo. 46, 195 pp.

Luciane Marinoni and Mírian Nunes Morales, *Departamento de Zoologia, Universidade Federal do Paraná, Caixa Postal 19020, 81531-980, Curitiba, Paraná, Brazil (e-mail: lmarinoni@ufpr.br; mirian_nm@yahoo.com.br)*